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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,863	07/29/2005	Ghassan Naim	139366WOUS	6382
24587 7590 02/22/2008 ALCATEL LUCENT INTELLECTUAL PROPERTY & STANDARDS 3400 W. PLANO PARKWAY, MS LEGL2 PLANO, TX 75075			EXAMINER NGUYEN, HUY D	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 02/22/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/511,863

**Applicant(s)**

NAIM ET AL.

**Examiner**

Huy D. Nguyen

**Art Unit**

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 2 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-12, 16 and 17 is/are allowed.
- 6) ☒ Claim(s) 13-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 13-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 13 recites the limitations "the signature response, the international mobile identity number, the random number, and the ciphering key" in lines 7-8. There is insufficient antecedent basis for these limitations in the claim.

Claims 14-15 are also rejected under 35 U.S.C. 112, second paragraph because they depend on claim 13.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berkowitz et al. (US Patent No. 7,133, 678) in view of Perkins et al. (US 2002/0178358 A1).

Regarding claim 13, Berkowitz et al. teaches a method for providing authentication of a mobile terminal in a hybrid wireless network (e.g., the hybrid public/private wireless network 100 – see fig. 1 and col. 4, lines 32-45) wireless network having at least one radio access network based on a first technology and a core network based on a second technology (see col. 6, lines 2-18). Berkowitz et al. does not teach receiving parameters in a message compatible with a first technology, comparing a signature response using an international mobile identity number, a random number, and a ciphering key, and sending new parameters for authentication during a future authentication process. Perkins et al. teaches receiving parameters (e.g., set of quintuplets – see paragraph 0039) in a message compatible with a first technology, comparing a signature response using an international mobile identity number (e.g., AAAH 320 authenticates the signature by comparing the identity of MN 335 to the signature received – see paragraph 0039), a random number (e.g, RAND included in the authentication vector – see paragraph 0041), and a ciphering key (e.g, CK included in the authentication vector – see paragraph 0041), and sending new parameters for authentication during a future authentication process (this is inherent, when the authentication process begins, a RAND is generated and based on the RAND, the RES, CK, AK, IK are generated). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the authentication process as taught by Perkins et al. in the system of Berkowitz et al. in order to provide strong authentication and to save time because by generating the random number at the base station local to mobile node, the random number is received much faster by the mobile node than having to wait for it to be generated in home authority.

Regarding claim 14, Berkowitz et al. in view of Perkins et al. teaches the method of claim 13 wherein the receiving parameters further comprises receiving a signature response, a random number, and a ciphering key (e.g., XRES, RAND, and CK included in the authentication vector – see paragraph 0041).

Regarding claim 15, Berkowitz et al. in view of Perkins et al. teaches the method of claim 13 wherein the sending new parameters for authentication further comprises a new random number and a new ciphering key (this is inherent, when the authentication process begins, a RAND is generated and based on the RAND, the RES, CK, AK, IK are generated).

***Allowable Subject Matter***

6. Claims 3-12, 16-17 are allowed. The following is an examiner's statement of reasons for allowance:

Regarding claim 3, Berkowitz et al. teaches a method for providing authentication of a mobile terminal in a hybrid wireless network (e.g., the hybrid public/private wireless network 100 – see fig. 1 and col. 4, lines 32-45) wireless network having at least one radio access network based on a first technology and a core network based on a second technology (see col. 6, lines 2-18), the method comprising: sending an initiating authentication message to a mobile unit (e.g., sending an authentication request to the ATC who in turn forwards the response to NIU.sub.B.- see col. 6, lines 16-18).

Perkins et al. teaches receiving parameters (e.g., set of quintuplets – see paragraph 0039) in a message compatible with a first technology, comparing a signature response using an international mobile identity number (e.g., AAAH 320 authenticates the signature by comparing

the identity of MN 335 to the signature received – see paragraph 0039), a random number (e.g., RAND included in the authentication vector – see paragraph 0041), and a ciphering key (e.g., CK included in the authentication vector – see paragraph 0041).

However, the cited prior arts, either alone or in combination, fail to teach sending the signature response, the random value, the ciphering key in a form compatible with the second technology, receiving an authentication indication in a message compatible with the second technology, sending the random value and the ciphering key in an authentication message compatible with the first technology, in combination with all of other limitations in the claim.

Claims 4-12 depend on claim 3. Thus, they are allowable.

Regarding claim 16, Berkowitz et al. teaches a method for providing authentication of a mobile terminal in a hybrid wireless network (e.g., the hybrid public/private wireless network 100 – see fig. 1 and col. 4, lines 32-45) wireless network having at least one radio access network based on a first technology and a core network based on a second technology (see col. 6, lines 2-18).

Hsu et al. (US 2002/0181498 A1) teaches requesting a handshake authentication protocol challenge of the mobile terminal from the radio access network (e.g., the PDSN requires the wireless device to authenticate itself before allowing network-layer protocol packets to be exchanged by requesting the use of Challenge Handshake Authentication Protocol).

However, the cited prior arts, either alone or in combination, fail to teach invoking an authentication process using stored parameters from a previous authentication process; passing predetermined parameters for the authentication by the core network through a hybrid mobile switching center to the mobile terminal using messages conforming to the first technology, the

parameters conforming to the second technology; invoking an authentication process by the mobile terminal using the passed parameters during the current authentication process; informing the hybrid mobile switching center of the core network for the authentication of the mobile terminal, in combination with all of other limitations in the claim.

Claim 17 depends on claim 16. Thus, it is allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Contact Information***


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy D. Nguyen whose telephone number is 571-272-7845. The examiner can normally be reached on M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Huy D Nguyen  
Patent Examiner  
Art Unit 2617

  
JOSEPH FEILD  
SUPERVISORY PATENT EXAMINER